



FACILITY COMPLIANCE AUDIT REPORT

Division of Waste Management Solid Waste Section

UNIT TYPE:

Lined MSWLF		LCID		YW		Transfer		Compos t		SLAS		COUNTY: Gaston PERMIT NO.: 36-02 FILE TYPE: COMPLIANCE
Closed MSWLF	X	HHW		White goods		Incin		T&P		FIRM		
CDFL		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF		

Date of Audit: March 28, 2012

Date of Last Audit: February 22, 2011

FACILITY NAME AND ADDRESS:

Gaston County-Biggerstaff Landfill
Abel Road
Bessemer City, NC 28016

GPS COORDINATES: **N:** 35.33548° **E:** -81.29084°

FACILITY CONTACT NAME AND PHONE NUMBER:

Ray Maxwell, Gaston Co. Public Works Director
(704) 922-0267
rmaxwell@co.gaston.nc.us
Marcie Smith - Solid Waste & Recycling Administrator
(704) 922-0267
marcie.smith@co.gaston.nc.us

FACILITY CONTACT ADDRESS:

P.O. Box 1578
Gastonia, NC 28053-1578

AUDIT PARTICIPANTS:

Bill Wagner, NCDENR-Solid Waste Section

STATUS OF PERMIT:

In-active: site closed.

Closure effective on November 28, 1995

SITE HISTORY and BACKGROUND:

MSWLF Facility Permit No. 36-02	Issuance Date	Document ID No.
Landfill Operations Begun	September 1967	N/A
Original Permit to Operate Issued	January 30, 1981	N/A
Landfill Stops Receiving Waste	1987	N/A
Landfill Closed – Closure Letter Issued i.a.w. 15A NCAC 13B .0510 from the Division to Gaston County	December 11, 1991	N/A
Second Closure Letter – Issued i.a.w. 15A NCAC 13B .0510 from the Division to Gaston County	July 24, 1996	N/A
Letter from Warren Shindle (Gaston Co. Engineer) to the Division Requesting Closure to be Effective as of November 28, 1995 (to coincide with the first groundwater monitoring event.	August 6, 1996	N/A
Letter from the Division to Warren Shindle Approving the Effective Closure Date to be November 28, 1995.	August 27, 1996	N/A

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PURPOSE OF AUDIT:

Comprehensive Audit

STATUS OF PAST NOTED VIOLATIONS:

None

You are hereby advised that, pursuant to N.C.G.S. 130A-22, an administrative penalty of up to \$15,000 per day may be assessed for each violation of the Solid Waste Statute or Regulations. For the violation(s) noted here, you may be subject to enforcement actions including penalties, injunction from operation of a solid waste management facility or a solid waste collection service and any such further relief as may be necessary to achieve compliance with the North Carolina Solid Waste Management Act and Rules.

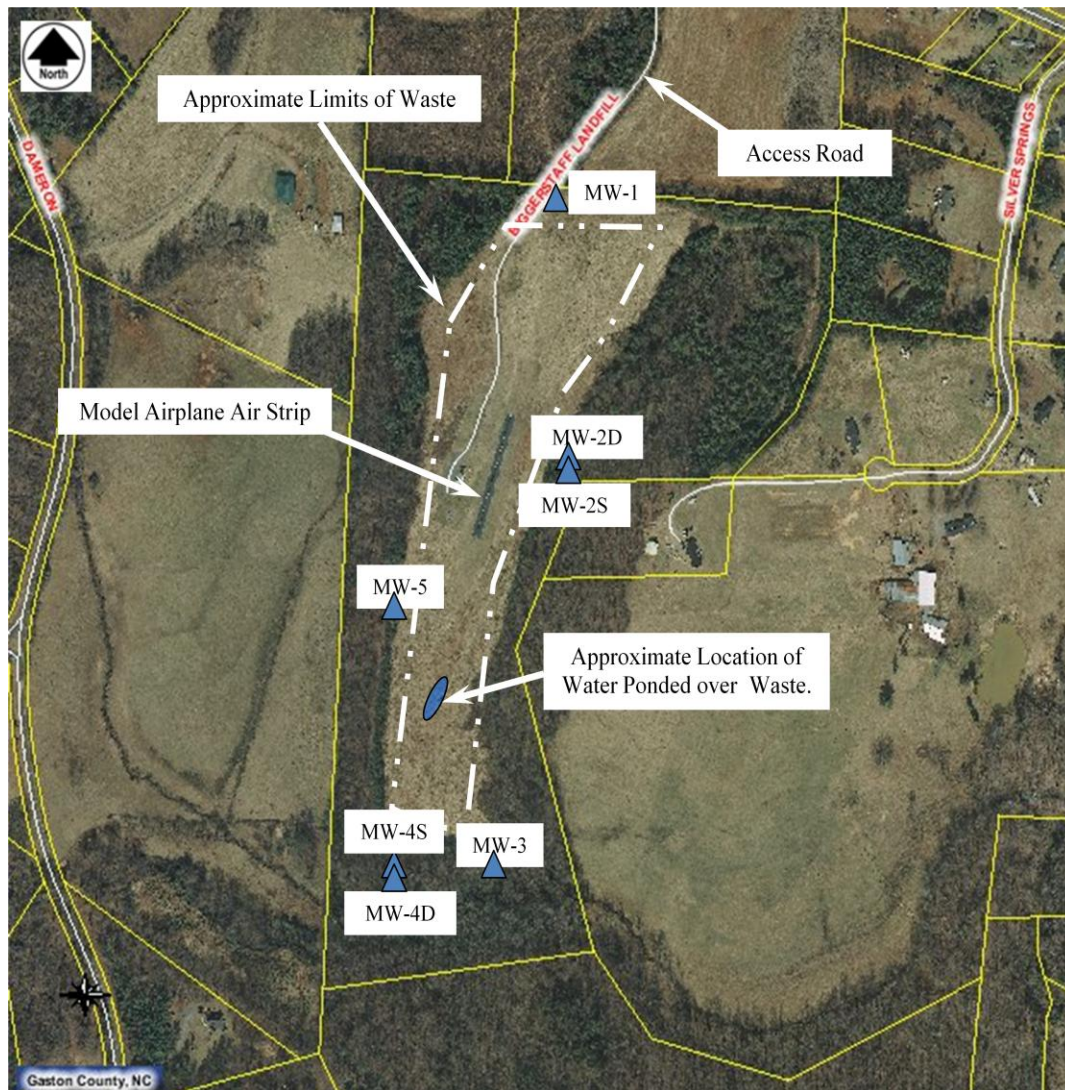


Figure 1: Biggerstaff Landfill-Closed – Gaston Co. GIS Aerial with Groundwater Monitoring wells.

OBSERVED VIOLATIONS:

1. Landfill Gas Monitoring

15A NCAC 13B .1626(4)(b) which states in part “Owners or operators of all MSWLF units must implement a routine methane monitoring program.”; and the rule goes on to state “The minimum frequency of monitoring shall be quarterly.”

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On November 8, 2001 Mark Poindexter (Solid Waste Section) sent a letter (enclosed) to Ray Maxwell (Gaston Co. Solid Waste Director) concerning the “*Phase I Site Assessment Report for the Gaston County Auten Road, Biggerstaff and Cramerton Closed Sanitary Landfills (Permit #36-3, 36-02, and 36-01)*”. Comments specific to the Cramerton Landfill included:

Item #1: “*Quarterly landfill gas monitoring is required at all municipal waste sites. The Section shall be notified that a landfill gas monitoring system has been installed and is being monitored on a quarterly basis. Additionally, the Section shall be notified if there is an exceedance of the regulatory threshold. Please provide the Section confirmation that the above requirements are being fulfilled.*”

Within 60-days of your receipt of this report, please develop a landfill gas monitoring plan and submit it for approval to:

Brian Wootton – Hydrogeologist
Division of Waste Management – SWS
Mail Service Center 1646
Raleigh, NC 27699-1646

Within 30-days of Mr. Wootton’s approval of the “Landfill Gas Monitoring Plan”, Gaston County must begin monitoring for landfill gas in accordance with approved plan.

The suggested outline for a “Landfill Gas Monitoring Plan”, is detailed in Section 8 of the enclosed “NCDENR Division of Waste Management, Solid Waste Section, Landfill Gas Monitoring Guidance, November 2010”.

2. Operational Requirements

15A NCAC 13B .0505(5)(b) states that “Surface water shall not be impounded over or in waste.”

On March 28 2012 Mr. Wagner observed an area of water impounded over waste in the SE quadrant of the landfill. (Photos #3 and #4).

Within 30-days receipt of this report, Gaston County must, using best management practices, take corrective actions to ensure that waste cannot become impounded over waste at the closed Biggerstaff landfill. As soon the corrective actions have been successfully implemented please notify Bill Wagner at:

NCDENR – Asheville Regional Office
2090 US Hwy 70
Swannanoa, NC 28778
(828) 296-4705

AREAS OF CONCERN AND COMMENTS:

1. The entrance to the facility is secured with a lockable to prevent unauthorized entry. (Photo #1)
2. Edge of waste markers were in place.
3. No property line markers were observed at the time of the inspection. **Please install permanent property line markers where ever it is not clearly evident that the required buffer of 50-feet, between all property lines and disposal areas, is being maintained.**
4. An asphalt runway measuring 30’ x 400’ has been constructed on the landfill for use of model airplanes. Two open-air structures have also been constructed for use as a picnic area and operations of the runway along with a gravel parking area. This activity was approved in an April 6, 2011 letter (DIN 13539) from the Division to Ray Maxwell – Gaston County Public Works Director.
5. The access road to the landfill was well maintained and in good condition at the time of the inspection

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6. All seven of the groundwater monitoring wells were located and found to be in good condition. Locational data (latitude and longitude) for each groundwater monitoring well was determined. (Table 1).

Well ID	Latitude (N)	Longitude (E)
MW-1	35.33792°	-81.28950°
MW-2	35.33551°	-81.28938°
MW-2D	35.33550°	-81.28938°
MW-3	35.33221°	-81.28983°
MW-4	35.33222°	-81.29110°
MW-4D	35.33220°	-81.29109°
MW-5	35.33417°	-81.29153°

Table 1: Locational data for Groundwater Monitoring Wells

7. All wells were properly secured with padlocks and marked with unique identifies. (Photo #2)
8. **Please ensure that the two surface water sampling locations (“upstream” & “downstream” as identified on the enclosed *Buxton Environmental’s Figure 2: Site Layout Map* of the Biggerstaff Landfill) are “permanently marked in the field to help ensure consistency in sample collection” as required in Mark Poindexter’s letter of November 8, 2001.**



1. Gate at the landfill entrance.



2. Groundwater monitoring well (typical) MW-5.



3. Looking (N) at impounded water in the SE quadrant of the landfill. (White edge-of-waste marker is in the right center.)



4. Looking (SE) at the impounded water in the SE quadrant of the landfill.

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9. The landfill gas monitoring records submitted by Gaston County identified the wells as MW-1 through MW-7. The landfill's groundwater well monitoring wells are identified in the field as MW-1, MW-2, MW-2D, MW-3, MW-4, MW-4D, and MW-5. **Please ensure the all future landfill gas monitoring reports reference each well as they are actually identified in the field.**
10. A LANDTEC Gem™ 2000 Portable Landfill Gas Analyzer is used by landfill staff to monitor for the presence of landfill gas.
11. Records show that methane gas has historically been detected at groundwater monitoring wells 1, 3, 4, 4D, and 5. **Gaston County should perform further evaluation to determine if methane levels are present at the property boundary, and if those levels are above the lower explosive limit.**
12. A good vegetative cover was observed on the landfill. Majority of vegetation was well mowed.
13. Some differential settling of the cap is occurring on the upper portions of the southern end of the landfill cap. Please monitor this situation and take necessary corrective actions to ensure that (a) Surface water shall be diverted from the operational area; (b) Surface water shall not be impounded over or in waste; and (c) the landfill cap shall be adequately sloped to allow surface water runoff in a controlled manner.

CLOSURE HISTORY:

In a review of the Solid Waste Section files, the following five documents relating to the closure of the Biggerstaff Sanitary Landfill (36-02) were found.

1. December 11, 1991 letter from James Coffey – Solid Waste Section, to William Beasley, Director – Gaston County Public Works RE: “*Closure Letter, Gaston County, Landfill Permit No. 36-02*”
Summary: The letter acknowledges that the Biggerstaff Landfill (36-02) has been closed in accordance with the conditions in 15A NCAC 13B .0510 and specifies the required post-closure maintenance and water quality monitoring. Closure shall be in accordance with Section 15A NCAC .0505 and with the post closure conditions specified in the “Closure Letter” which states in-part: (1)(b) “Permanent erosion control measures, as necessary to prevent silt from moving off-site and excessive on-site erosion; (1)(c) Drainage control measures, as necessary to prevent the impoundment of surface water over waste; (1)(d) Vegetation requirements, stabilization with native grasses; and (1)(e) Leachate control, containment on-site or property discharged off-site. The letter also stated that “post-closure necessary maintenance for this facility shall consist of whatever measures, procedures, and activities are required to maintain this facility in compliance with those closure conditions specified within this letter.”
2. July 24, 1996 Letter from James Coffey – Solid Waste Section, to Warren Schindle [sic] – Gaston County RE: “*Closure of the Biggerstaff Landfill Permit # 36-02*”
Summary: Closure shall become effective upon written notification by Gaston County that the facility shall be maintained in compliance with the post closure conditions specified in the “Closure Letter” which states in-part: Management of landfill gas must meet the design standards in Rule .05023(2)(a); Management of surface water must meet the design standards in Rule .05023(2)(c); Surface water runoff must be controlled; Surface water shall not be impounded over waste; the integrity and effectiveness of the final cover system and any permanent erosion control devices must be maintained; Proposed post closure uses of the landfill must be reviewed and approved by the Section and such uses must not violate any post closure conditions; continuing solid waste management activities shall not violate any post closure conditions and must meet any other applicable requirements.
3. August 6, 1996 Letter from Warren Schindle – Gaston County, to James Coffey – Solid Waste Section RE: “*Closure of the Auten Road Landfill, Permit #36-03*”
Summary: Written notification from Gaston County to the Section that the facility shall be maintained in compliance with the post closure conditions specified in the “Closure Letter” dated July 24, 1996.
4. August 27, 1996 Letter from James Coffey Solid Waste Section, to Warren Schindle [sic] – Gaston County

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RE: “*Closure of the Cramerton Landfill (Permit # 36-01), the Biggerstaff Landfill (Permit # 36-02), and the Auten Road Landfill (Permit #36-03)*”

Summary: Written notification from the Section to Warren Shindle approving Gaston County’s request that November 28, 1995 be the effective closure of each of the three reference landfills.

5. November 8, 2001 Letter from Mark Poindexter – Solid Waste Section, to Ray Maxwell – Gaston County
RE: “*Phase I Site Assessment Report for the Gaston County, Auten Road, Biggerstaff and Cramerton [sic] Closed Sanitary Landfills (Permit # 36-03, 36-02, and 36-01).*”

Biggerstaff Landfill Summary: Mr. Poindexter stated that “Quarterly landfill gas monitoring is required at all municipal solid waste sites; The Section shall be notified when the landfill gas monitoring system has been installed and is being monitored on a quarterly basis and; Site surface water sampling locations shall be permanently marked in the field to help ensure consistency in sample collection.”

Please contact me if you have any questions or concerns regarding this audit report.



Bill Wagner

Environmental Senior Specialist
Regional Representative

Phone: (828) 296-4705

Sent on: 4/03/12 to: Jan Winters – Gaston Co. Manager P.O. Box 1578 Gastonia, NC 28053		Email		Hand delivery		US Mail	X	Certified No. <u>7008 0150 0000 7473 4851</u>
Sent on: 4/03/12 to: Ray Maxwell, Gaston Co. Public Works Director		Email		Hand delivery		US Mail	X	Certified No. <u>7008 0150 0000 7473 4868</u>

enc. November 8, 2001 Letter from Mark Poindexter: “*Phase I Site Assessment Report for the Gaston County Auten Road, Biggerstaff and Cramerton Closed Sanitary Landfills (Permit #36-3, 36-02, and 36-01)*”

Buxton Environmental’s Figure 2 - “*Site Layout Map of the Biggerstaff Landfill*”

“NCDENR Division of Waste Management, Solid Waste Section, *Landfill Gas Monitoring Guidance, November 2010*”

ec: Jason Watkins, District Supervisor – Solid Waste Section
Mark Poindexter, Field Operations Branch Head – Solid Waste Section
Shawn McKee, Compliance Officer – Solid Waste Section
Brian Wootton, Hydrogeologist – Solid Waste Section
Marcie Smith, Solid Waste & Recycling Administrator – Gaston County

c: Jan Winters, Gaston Co. Manager